

STN

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PB attachment

FILE 'CAPLUS, MEDLINE' ENTERED AT 14:15:13 ON 03 JAN 2001
L1 4 S BETA BETA-CAROTENE 15,15-DIOXYGENASE
L2 93 S WYSS
L3 1 S L2 AND CAROTENE
L4 99 S CAROTENE AND DIOXYGENASE
L5 9 S L4 A

Dialog

Set	Items	Description
?s	carotene (1n)	dioxygenase
	63661	CAROTENE
	20848	DIOXYGENASE
	S1	120 CAROTENE (1N) DIOXYGENASE
?s	s1 (10n)	beta
		120 S1
	3259781	BETA
	S2	70 S1 (10N) BETA
?s	beta (10n)	carotene (10n) dioxygenase
	3259781	BETA
	63661	CAROTENE
	20848	DIOXYGENASE
	S3	245 BETA (10N) CAROTENE (10N) DIOXYGENASE
?s	beta (10n)	carotene
	3259781	BETA
	63661	CAROTENE
	S4	47883 BETA (10N) CAROTENE
?s	s4 (10n)	dioxygenase
	47883	S4
	20848	DIOXYGENASE
	S5	238 S4 (10N) DIOXYGENASE

?t s2/3,k/1-70

2/3,K/6 (Item 6 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

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In vitro and in vivo inhibition of *betacarotene* *dioxygenase* activity by canthaxanthin in rat intestine.**

AUTHOR: Grolier Pascal(a); Duszka Christelle; Borel Patrick;
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JOURNAL: Archives of Biochemistry and Biophysics 348 (2):p233-238 Dec. 15,
1997

ISSN: 0003-9861

DOCUMENT TYPE: Article

RECORD TYPE: Abstract

LANGUAGE: English

In vitro and in vivo inhibition of *betacarotene* *dioxygenase* activity by canthaxanthin in rat intestine.**

ABSTRACT: *beta**Carotene* *dioxygenase* catalyzes the conversion of provitamin A carotenoids to vitamin A in mammalian tissues. Whether the enzyme can also cleave non-provitamin A carotenoids to retinoid analogs with biological activities is still unclear. We investigated (i) substrate specificities of *beta**carotene* *dioxygenase* toward provitamin A and non-provitamin A carotenoids and (ii) potential antagonistic effects of non-provitamin A carotenoids on beta-carotene conversion to vitamin A...

...carotene for intestinal absorption and inhibits the conversion of beta-carotene to vitamin A. Thus, we suggest that although canthaxanthin is not a substrate for *beta**carotene* *dioxygenase*, it is likely to affect the activity of provitamin A carotenoids by direct interaction with the enzyme.

DESCRIPTORS:

CHEMICALS & BIOCHEMICALS: *beta**carotene* *dioxygenase*--

2/3,K/13 (Item 3 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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08623350 Genuine Article#: 308DP No. References: 30

Title: Filling the gap in vitamin A research - Molecular identification of an enzyme cleaving beta-carotene to retinal

Author(s): vonLintig J; Vogt K (REPRINT)
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Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 2000, V275, N16 (APR 21), P
11915-11920
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Publisher: AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC, 9650 ROCKVILLE
PIKE, BETHESDA, MD 20814
Language: English Document Type: ARTICLE (ABSTRACT AVAILABLE)

...Abstract: is the oxidative cleavage of beta-carotene; however, this enzymatic step has resisted molecular analysis. A novel approach enabled us to clone and identify a *beta*-carotene* dioxygenase* from *Drosophila melanogaster*, expressing it into the background of a *beta*-carotene (provitamin A)-synthesizing and -accumulating *Escherichia coli* strain. The carotene-cleaving enzyme, identified here for the first time on the molecular level, is the...

2/3,K/28 (Item 3 from file: 71)
DIALOG(R)File 71:ELSEVIER BIOBASE
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01426815 20000101963

Filling the gap in vitamin A research. Molecular identification of an enzyme cleaving beta-carotene to retinal

Von Lintig J.; Vogt K.

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ISSN: 0021-9258

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NO. OF REFERENCES: 30

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E1	2	AU=WYSPIANSKI J O
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E3	2	*AU=WYSS
E4	92	AU=WYSS A
E5	2	AU=WYSS A N
E6	36	AU=WYSS A R
E7	4	AU=WYSS A W
E8	25	AU=WYSS A.
E9	13	AU=WYSS A.R.
E10	6	AU=WYSS ADRIAN
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?s e4 and s3

92	AU=WYSS A
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S14	3 AU="WYSS A" AND S3

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S20 2 S3 AND AU="HUNZIKER W."

?t s14/3,k/all